



MEDIA RELEASE

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Algae farming company targets billion dollar alternative meat market

A Brisbane-based algae farming company is one step closer to supplying an alternative protein food ingredient and omega-3 oils to meet the growing billion dollar global market.

Qponics Limited received a \$1 million grant through the federal government's Cooperative Research Centres Project (CRC-P) program in partnership with the University of Queensland (UQ) and Melbourne-based Nutrition Care Pharmaceuticals to establish a scalable, automated and modular algae farm.

The worldwide market for alternative protein is said to be worth \$2.2 billion and expected to reach \$17.9 billion by 2025ⁱ, while 60 percent of "meat" may be sourced from non-animal sources by 2040ⁱⁱ.

Qponics Managing Director and CEO, Dr Graeme Barnett, said global demand for plant-based alternative protein from soybeans and chickpeas in 'meatless meat', 'fishless tuna' and chicken-free chicken' products has suddenly escalated.

"Our goal was to transform UQ's pilot algae farm into a scalable, automated and modular algae farm to demonstrate the Company's capability to construct a large commercial marine microalgae farm planned for the Ballina region of northern New South Wales", Dr Barnett said.

"While we initially developed omega-3 fatty acid in an Australian marine species of microalgae, we've since found the high-protein biomass by-product is a perfect protein source for the alternative meat market."

Qponics is targeting the central eastern coast of Australia, 200 km north and south of Brisbane, as a 'Goldilocks zone' for outdoor raceway algae farming.

The region is close to the algae scientific expertise of UQ, has an ideal climate with high average sunshine hours, warm winters and summers that are not too hot and moderated by sea breezes, with available, affordable and flat agricultural land on the bank of tidal rivers close to urban centres.

The first species of marine microalgae to be commercially cultivated by Qponics is *Nannochloropsis oceanica*, originally isolated from the Brisbane River. This fast-growing species is harvested from each production pond every three days to extract EPA-rich oil as the Company's primary product.

Professor Peer Schenk from UQ said his team was pleased to work closely with Qponics to upgrade the algae farm into a small-scale commercial facility to produce a safe, natural and vegetarian-friendly source of EPA omega-3 oil.

"It is well established that most of the world's population is deficient in essential omega-3 fatty acids like EPA and DHA, which contributes to a wide spectrum of health disorders," Professor Schenk said.

EPA omega-3 sourced from algae is in high demand globally evidenced by frequent enquiries made to Qponics by prospective buyers from Europe, Asia and North America.

Marine microalgae farming has huge potential in plant-based alternative protein production. These microscopic plant-like cells produce vegetarian protein at more than 20 times the annual productivity per hectare of soybeans and chickpeas, without the need for freshwater.

Cultivating marine microalgae at scale for the exclusive production of protein-rich food ingredients in Australia is economically challenging, however, Professor Schenk said the principle of co-production has been demonstrated during this project.

“The algae is initially cultivated to extract EPA omega-3 oil, a high-value product to ensure farm profitability, with the high-protein but much lower value by-product suitable as an alternative protein food ingredient,” Professor Schenk said.

Cecily Chuang, Managing Director of Nutrition Care Pharmaceuticals, said there is extraordinary demand for quality Australian-made nutraceutical and food supplement ingredient products in the Asia/Pacific region, particularly for products manufactured from algae.

“Qponics has demonstrated its capability to lead the way towards cultivating marine microalgae on drought-proof farms in Australia requiring only brackish water from a tidal river, making it uniquely positioned to become a major global producer of marine microalgae-sourced vegetarian alternative protein and EPA omega-3 oil”, Ms Chuang said.

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About Qponics Limited:

Qponics Limited is a Brisbane-based unlisted public Australian company incorporated in Queensland. The Company’s business philosophy is centred on the concept of sustainable co-production from algae of (A) high-value nutraceutical and food supplement ingredient products including omega-3 oils, and (B) high-protein biomass by-products suitable as an alternative protein food ingredient in near-urban settings to ensure proximity to markets and distribution channels. Its aim is to construct and operate an ecologically responsible algae farm that integrates state-of-the-art cultivation, harvesting and oil extraction technologies.

A video of the transformation of the Brisbane pilot algae farm into the scalable, automated and modular small commercial algae farm may be viewed here: <https://vimeo.com/353164108>

Contact: *Dr Graeme Barnett, CEO and Managing Director:*
T: +61 7 3188 9086
E: graeme.barnett@qponics.com
Level 1, 7 Clunies Ross Ct, Brisbane Technology Park, Eight Mile Plains,
Brisbane, QLD 4113, Queensland, Australia
www.qponics.com

About The University of Queensland:

Through his role at the School of Agriculture and Food Sciences at The University of Queensland, Australia, Professor Peer Schenk heads laboratories in both Algae Biotechnology and Plant-Microbe Interactions. Professor Schenk is internationally recognised for his expertise in plant biotechnology, including the development of new disease resistant plants and his extensive knowledge of algae cultivation and harvesting. He is active in the sustainable production of biodiesel, protein-rich animal feed and other high value products from microalgae including omega-3 fatty acids.

About Nutrition Care Pharmaceuticals Pty Ltd:

Nutrition Care Pharmaceuticals Pty Ltd (NCP) is a Melbourne-based company that specialises in the fields of nutritional, herbal and complementary medicines. NCP manufactures the highest quality supplements in Australia and distributes within Australia and to many parts of the world, including New Zealand, South East Asia, China and India. The company is committed to providing drug-free, inexpensive, safe and effective health care products to people all over the world. It strives to promote health research and education, disease prevention, and truthful information about medical alternatives.



Dr Graeme Barnett
Chief Executive Officer and Managing Director, Qponics Limited

ⁱ <https://www.globenewswire.com/news-release/2019/07/11/1881420/0/en/Alternative-Protein-Market-worth-17-9-billion-by-2025-Exclusive-Report-by-Meticulous-Research.html>

ⁱⁱ <https://www.theguardian.com/environment/2019/jun/12/most-meat-in-2040-will-not-come-from-slaughtered-animals-report>